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December 29, 1997

To: John O'Grady
Remedial Project Manager
United States Environmental Protection Agencey
77 West Jackson
Chicago, Illinois 60604

From: Raghavender Nagam
START Project Manager

Subject: Review of proposed scope of work for Vacant Lot/Fansteel
North Chicago, Illinois
TDD: S05-9712-012
PAN: 7D1201RSXX

Dear Mr. O'Grady:

The Ecology and Environment, Inc. (E & E), Superfund Technical Assessment and Response Team (START) has reviewed Fansteel, Inc.'s "Proposed Scope of Work for Vulcan Louisville Smelting Company Site". The following are the comments for the proposed scope of work.

Please consider these comments as draft and feel free to provide any additional information that need to be addressed for comments.

Sincerely,

Raghavender Nagam

(Raghavender Nagam)

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REVIEW AND COMMENTS

ON

"PROPOSED SCOPE OF WORK FOR

VULCAN LOUISVILLE SMELTING COMPANY SITE"

VACANT LOT/FANSTEEL

NORTH CHICAGO, ILLINOIS

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The following are general comments on the proposed scope of work.

- The work plan's scope of work should address how and what background criteria will be used to evaluate contamination after analyzing the samples. This comment is applicable for soil, sediment, and groundwater samples. This in essence will decide contamination evaluation criteria. The work plan should address each contaminant level that will be used to characterize it as a contaminant of concern.
- The work plan does not propose how it will determine if any contamination present in the samples is attributable to Fansteel.
- Fansteel's work plan proposes to analyze for CLP metals. The work plan should also include analysis of tantalum and other metals that are unique to Fansteel's past operations.
- The work plan does not provide any proposal for evaluating Vacant Lot soil contamination with respect to Fansteel's potential contribution.

During the meeting with U.S. EPA and Fansteel representatives, U.S. EPA proposed that Fansteel should collect soil samples from their area and as well as from the Vacant Lot source/fill area to see if the source/fill contaminants are the same as Fansteel soil contaminants.

The following are specific comments on the proposed scope of work.

Proposed Intermediate Investigation - Sheet #1

General Scope of work:

PROPOSED:

- The work plan proposes installing six monitoring wells and sampling these wells and three existing monitoring wells for VOCs and determining the direction of near surface groundwater flow.

COMMENTS:

- If the three existing monitoring wells were sampled in the past, sharing that information will be helpful to U.S. EPA. This information will aid in ascertaining if the groundwater on Fansteel site is contaminated.

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PROPOSED:

- Determination of near surface groundwater flow...

COMMENTS:

- Based on the review of past investigations conducted by Geraghty and Miller, the shallow groundwater flow is in the direction of Pettibone Creek. It is not clear if the proposed determination of near surface groundwater flow direction is anyway different from what was done in the past.

Specific Scope of Work:

PROPOSED:

- The scope of work plan proposes six new monitoring wells.

COMMENTS:

- Only one well is proposed on the south side of Fansteel site. Since the groundwater flow is in the south and southwest directions, installing 2 wells on the south side may prove to be helpful in determining off-site migration of the plume.

PROPOSED:

- The scope of work plan proposes VOC analyses of groundwater.

COMMENTS:

- Past history of soil and groundwater sampling conducted on Fansteel property indicate lead and cadmium contamination. In addition to VOCs the monitoring well samples should also be analyzed for lead, cadmium and tantalum.

PROPOSED:

- The scope of work plan proposes to drill monitoring wells until the onset of first confining layer (approximately 40 feet below ground surface (bgs).

COMMENTS:

- Vacant Lot EE/CA geoprobe sampling was conducted by collecting water

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samples around 15 to 20 feet bgs. The work plan does not specify if water sample will be collected at the first onset of water table (shallow water table) or if a sample will be collected after installing the monitoring well. Based on Vacant Lot EE/CA drilling, it will be appropriate to collect a sample around 15 to feet bgs to characterize the presence of contamination. A more thorough review of Geraghty and Miller's report should be considered for evaluating the characteristics and depths of confining layers.

- If monitoring wells are to be installed down to 40 feet bgs, water samples need to be collected at different intervals, beginning with the first onset of water table.
- The work plan should also address precautions that need to be taken to prevent carrying down contaminants during drilling.

Proposed Intermediate Investigation - Sheet #2

Background Section:

- Outfall #2 origin is unknown.

COMMENTS:

- Outfall #2 is located at the south end of Pettibone Creek on Vacant Lot site. Outfall #2 comes from the direction of Fansteel property and is located just north of 22nd Street on Vacant Lot site. National Pollutant Discharge Elimination System (NPDES) permit for Fansteel indicates this to be its outfall.

Specific Scope of Work:

PROPOSED:

- 6 sediment samples will be collected from 0-2 feet depth and will be analyzed for metals and polychlorinated biphenyls (PCBs). Three sediment samples will be collected south of Outfall #2 and three sediment samples will be collected north of Outfall #3.

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COMMENTS:

- All sediment samples also require pesticide and polynuclear aromatic (PNA) analyses. Background section acknowledges the presence of these contaminants in sediments. The sediment analyses should also include tantalum and other metals that are unique to Fansteel's past operations.
- Collection of 3 sediment samples south of Outfall #2 may not be possible due to the short distance between the outfall and 22nd Street. Sediment sample locations will be more appropriate if one sample is collected at the outfall itself, one collected in the Creek south of outfall and one collected in the Creek north of outfall.
- Instead of collecting 3 sediment samples north of Outfall #3, sediment sample locations will be more appropriate if one sample is collected at the outfall itself, one collected in the Creek south of outfall and three to four collected in the ditch north of the Creek.
- A composite sample from 0 to 2-foot depth may not provide true characterization of sediment contamination. A 0 to 6-inch interval sample and a 6 to 12-inch interval sample will provide more representative characterization, since PNAs are known to persist in the environment over long periods of time.

Proposed Intermediate Investigation - Sheet #3

Specific Scope of Work:

PROPOSED:

- Work plan calls for collecting six sediment samples south of 22nd Street (South of Vacant Lot Site) extending to the property boundary of Great Lakes Naval Training Center (GLNTC).

COMMENTS:

- To effectively use the analytical results of the samples collected under this work plan, sediment information at or near Fansteel outfalls should be available. This requires collecting sediment samples at Fansteel Outfalls south of 22nd Street. The results of these locations then can be compared with other locations of the Creek to determine potential contribution from the outfalls.